"We Know Who You Are and We Know Where You Live": The Instrumental Rationality of Geodemographic Systems

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Abstract: This paper provides a critique of geodemographic systems, sophisticated marketing tools that combine massive electronic data bases on consumer characteristics and behavior, segmentation schemes, and Geographic Information Systems (GIS). Responsible for a "revolution" in marketing research, geodemographics represents a strategy to exercise rational knowledge-power over everyday life. This critique examines the strategic implications of each component of geodemographics, including electronic surveillance and the erosion of privacy; GIS, spatial inference, and the representation of social space; and segmentation and construction of consumer identity. The paper concludes with remarks about the role of the consumer in geodemographics and the potential for tactical resistances to its strategy.

Key words: marketing, surveillance, privacy, segmentation, GIS, consumer identity.

> This is our destiny: subject to opinion polls, information, publicity, statistics; constantly confronted with the anticipated statistical verification of our behavior, and absorbed by this permanent refraction of our least movements, we are no longer confronted with our own will. We are no longer even alienated, because for that it is necessary for the subject to be divided in itself, confronted with the other, to be contradictory. . . . Each individual is forced despite himself or herself into the undivided coherency of statistics. (Baudrillard 1985, 580)

In this paper I develop a critique of the technical practice of geodemographics, a decision-support system that has been responsible for nothing less than a revolution in contemporary marketing research (Curry 1993, 3; Baker and Baker 1992, xvi). Geodemographics is an information technology that enables marketers to predict behavioral responses of consumers based on statistical models of identity and residential location. It is primarily used to "uncover and exploit new markets" (Weinstein 1986) for products and services by precisely locating potential customers, or "prospects," to be selectively targeted with promotional materials through various media. It is also used by retailers for site location, sales force allocation, stock management, and media planning (Curry 1993; Baker and Baker 1992; Hughes 1991), and may be applied by nonprofit institutions for fund raising (see, e.g., Holtz 1992), by governments for administrative purposes, and by political campaigners seeking to identify audiences for customized political messages (Robbin 1980).

Geodemographics works by collecting spatially referenced data on consumers, constructing statistical models of identity, and mapping distributions of consumer characteristics or types. A geodemographic system combines three essential components: massive electronic data bases composed of public and private, individual and aggregate records on consumer identity and behavior; Geographic Information Systems (GIS) that provide the tools to analyze, locate, and graphically represent the spatial distribution of consumer characteristics; and segmentation schemes that identify consumer types through factor and cluster analysis of spatially referenced demographic and psychographic data.

The practice of geodemographics is

based on a detailed knowledge of consumer behavior obtained through systematic surveillance of social life, the elaboration of reductionist models of consumer identity, and the inference of unobserved behavior from residential location. It is based on several assumptions: first, that social identity is reducible to an aggregation of measurable demographic and psychographic characteristics and that such aggregations can be classified into a limited number of coherent, stable types; second, that such a social identity is predictive of behavior, and particularly of consumption, such that the "classification of an individual on the basis of a few dozen attitudes and demographics tells us what to expect of that person in hundreds of other domains" (Mitchell 1983, vii); and third, that residential location is a determinant of identity and behavior, following "the fundamental sociological truism that 'birds of a feather flock together'" (Claritas/NPDC, n.d.). Given these assumptions, the purveyors of geodemographic systems and services claim that "if you're trying to find a person with particular attributes, we can point you to his doorbell" (Gary Hill, president of Claritas, Inc., cited in Roberts 1992, 26), and that, if you "tell me someone's zip code . . . I can predict what they eat, drink, drive—even think" (Jonathan Robbin, founder of Claritas, Inc., cited in Weiss 1988, 1).

Geodemographics is undoubtedly "a hype-ridden industry" (Openshaw 1989, 113), and it is tempting to dismiss such claims as merely so much self-promotional rhetoric, a characteristic of information technologies in general (Roszak 1986, 182). Marketers are certainly not as omniscient as they claim (Larson 1992, 101), and the improvements in target marketing are typically marginal "lifts" in response, say from 2 to 3 percent, that only become "dramatic gains" (Humby 1989, 65) because of the scale of the enterprise (see also Openshaw 1989, 114; Merrick and Tordella 1988, 30). Nevertheless, it is important that we take seriously the "faith" of marketers in this technology, for it is based upon an instrumental rationality that desires to bring the processes of consumption further under the control of the regime of production. My concern over this technology is not whether geodemographics really can accurately predict profitable marketing strategies, but rather that geodemographics displays a strategic intent to control social life and that the ideological conception of identity and social space within the model may become real—in other words, that the assumptions will be validated as the strategies take effect.

In the following discussion I provide a brief introduction to the development and contemporary practice of geodemographics. I then consider in turn each of the three components of geodemographic information systems and their sociotheoretical implications. First, I describe the accumulation and circulation of consumer information in electronic data bases and discuss its implications for personal privacy and the integrity of personal identity. This issue has recently received attention in academic and popular literature (see, e.g., Gandy 1993; Lyon 1994; Paulson 1988; Schwartz 1991), reflecting a mounting concern that large public and private data bases pose a threat to the privacy of individuals. I argue, however, that "data merchants" (Roszak 1986, 21) will find a way to allay this fear by legitimating the acquisition of personal data on consumers as a necessary condition of the services that they provide and by relying on ecological and statistical inference. Second, I examine the GIS component of geodemographics upon which such inference is based, and which also provides the executive decision-making component of the geodemographic system. I consider some of the technical problems involved in spatial analytical tools contained in geodemographic systems, but my main concern is implications of the GIS model of reality in the exercise of strategic power/knowledge over social life. Third, I discuss the demographic and psychographic segmen-

tation of consumers and the problematical conception of social identity that is implied in this methodology. Here I discuss the instrumentalism of geodemographics and prospects for the management of consumer behavior. I conclude by speculating on the potential for resistance to the strategy of geodemographic marketing systems.

Geodemographic Information Systems

Marketing theory argues that a sea change has occurred in the nature of contemporary consumption, recognizing for example that "slower population and category growth, intensifying competition from around the globe, cautious consumers, a splintered marketplace and increasingly demanding retailers are fundamentally changing the way [marketers] do business" (NDL 1992b). Heralding the coming of a "de-massified society" and "a profusion of life-styles and more highly individualized personalities" (Toffler 1980, 231, 255–56), marketing strategies have shifted from the promotion of homogeneous products in mass markets through the mass media to the promotion of highly differentiated product lines to particular niche markets in "special interest" media (Swenson 1990), and even through personalized media to individual consumers (Curry 1993; Hughes 1991). Although, like other "post-isms," this account tends to ignore evidence of the historical antecedents of contemporary processes, and in this case, the existence of product differentiation, target marketing, and even the maintenance of consumer data bases since at least the nineteenth century (see Goss 1994), systematic customer segmentation and "micro-marketing" was not conceived until the 1950s (W. Smith 1956) and was not practicable on a large scale until the 1970s, when theoretical, technological, and institutional innovations permitted the accumulation and management of electronic data bases on consumer behavior, the statistical analysis of vast amounts of data, and the precise geographic location of consumers for marketing purposes.

The invention of geodemographics is conventionally attributed to Jonathan Robbin (Burnham 1983, 90), a "computer whiz" (Weiss 1988, 10) and "statistical lothario" (Larson 1992, 31) who combined computational skills, training in sociology, and entrepreneurial drive to transform the iterative factorial ecologies of positivist urban social science into a powerful marketing tool. The technique involved a factor analysis of masses of aggregate census data for 240,000 block groups and other geographic units of the U.S. Bureau of the Census, followed by a cluster analysis of the factor scores in each block group to identify groupings of similar neighborhood types. In order to be "actionable"—to be used to advantage by marketing management (Sampson 1992, 236); that is, to reach consumers cheaply and quickly through bulk mailings (Curry 1993, 201)—the block group data were first aggregated into the 36,000 delivery areas of the recently institutionalized Zone Improvement Plan (ZIP) of the U.S. Postal Service. The analysis, which Robbin called PRIZM (Potential Rating Index for ZIP Markets), produced 40 geodemographic segments defining distinct social (stereo)types that most effectively and parsimoniously "captured" the variance in the original data.

While these early efforts required the use of large computers and considerable technical skill, a contemporary geodemographic system can operate on a marketing executive's desktop computer and "does not require its users to have technical knowledge of cartography, demographics or visualization methods" (Scan/US 1994, 2). As a result of consolidation and cooperation through mergers and licensing agreements between the separate components of the geodemographics industry, large "information conglomerates" (Curry 1993, 27) have emerged to purvey proprietary decision-support systems that are fully integrated with massive national data bases and segmentation schemes.[1] Thus, "revo-

[1] Mergers or acquisitions include Claritas, Inc. and National Planning Data Corporation (NPDC) in 1991; Strategic Mapping Incorpo-

lutionary new personal computer software is now available [for] . . . every businessperson" (Baker and Baker 1992, xvi).

Tactics International, for example, provides a "total marketing system" called Tactician, a desktop system that incorporates a million-row data base, on-line connectivity to 45 consumer data bases, automatic algorithms performing retail merchandising and drive-time analysis, retail allocation optimizing and forecasting, and a sophisticated global-capacity GIS (Tactics International 1993). Claritas, Inc., the company that Robbin himself founded, provides Compass, which "makes it possible to integrate demographics, specialized data, customer data, geography, mapping, and real-life marketing experience into one process called . . . 'Precision Marketing'" (Claritas/NPDC 1992).

Customer information that is maintained in corporate data bases is supplemented by the proprietary and public census data in the massive electronic data bases of the major geodemographic corporations. Four types of data are provided: *geographics*, including region, climate, population density, market area, ZIP code, census area, and address; *demographics*, including age, sex, family status, income, occupation, education, religion, race, nationality, and housing status; *psychographics*, including social class, values and lifestyles, and personality; and *consumer behavior*, including benefits sought, usage rate, loyalty, knowledge, and attitude to specific products (Michman 1991, 28). The segmentation of consumer identity is typically conducted by the geodemographic corporation, which then matches a client's data base with its proprietary consumer types, providing a detailed profile of potential customers. The Geographic Information System provides the spatial analytical tools used to aggregate and assign spatially referenced consumer information—"the most important tool of all . . . in today's competitive business climate" (DMIS 1992)—and to represent the results of analysis in visual form.

Successful applications of geodemographics are documented in a number of introductory texts (Curry 1993; Hughes 1991; Thomas and Kirchner 1991; Baker and Baker 1992) and journals such as *Business Geographics* and *American Demographics*. Nonprofit applications of geodemographics include local governments, for example, selecting optimal location for government services according to the distribution of potential clients (see, e.g., Grande 1992) and fund raising by charitable institutions seeking sympathetic segments to contribute to their causes (Curry 1993, 255). Applications of the "new magic" of geodemographics (Robbin 1980) to electoral campaigning includes the 1992 presidential election campaign, where it is said to have enabled Democratic campaign officials to "fine tune their targeting of battleground states" (Bryan 1993). The main application, however, and certainly the motivation that drives the development of the technology, is in marketing and retail decision making, of which the nonprofit and electoral applications may be seen as special cases—hence they are referred to as "social marketing" in the literature (see, e.g., Fine 1990). Excellent examples of the application of geodemographics in these fields include the "tracking" of customers by large mail order companies such as L.L. Bean, which pioneered the use of the technology during the 1970s (Curry 1993, 202); the marketing of

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rated and Donnelly Marketing Information Services, previously owned by the Dun & Bradstreet Corporation, a division of A.C. Nielson, in 1993 ("Strategic Mapping . . . " 1994); and R.L. Polk and Geographic Data Technologies, also in 1993. A good illustration of corporate linkages is provided by Equifax Inc.'s Infomark, which combines sophisticated GIS with its MicroVision segmentation system, built upon data from National Data Systems (a wholly owned subsidiary of Equifax) and Dataman Information Services, Inc., Electric Power Research Institute, Inc., Footwear Market Insights, Mediamark Research Inc., NFO Research Inc., NPD Crest, Simmons Market Research Bureau, and Stanford Research Institute's (SRI) Values and Lifestyles System (VALS).

media, financial, and health services (see esp. Thomas and Kirchner 1991); the optimal location of stores and showrooms for large corporations such as K-Mart (Thomas and Kirchner 1991, 81–84) and Toyota (Francese and Piirto 1990, 142–45); the location of franchises in restaurant chains such as Appleby's (Roberts 1992) and McDonald's (Francica 1991); and the location of regional shopping malls (Kerfoot 1993).

It is not my contention that geodemographics is dangerous because it enhances the profit-making capacity of private interests or the administrative efficiency of public institutions. The literature is careful to document applications of the technology toward "progressive" ends, and the geodemographic industry quite justifiably argues that the enhanced precision even in marketing applications eliminates redundancy in promotional campaigns, generating savings that might be passed on to consumers and reducing the nuisance of unsolicited and indiscriminate promotional communications (Weiss 1988, 27; Posch 1988). Once again, my concern is with the means of geodemographics and particularly the normative models of identity and the residential structuring of society that the widespread practice of the technology potentially actualizes.

I do not believe that the discipline of geography is particularly responsible for the development of geodemographics, although it has played an important supporting role in training researchers in the techniques of spatial science and more recently in the development of GIS. Some academic geographers have become directly involved in the development of geodemographic technology, particularly in Britain (Openshaw 1989; Flowerdew 1991), but more importantly geography departments train students who are sought for their expertise by the industry, especially in sales and technical support departments (personnel officer, Strategic Mapping, pers. comm. 25 July 1994). This presents a "profitable" opportunity for collaboration between mainstream geography and the rapidly growing geodemographics industry (Flowerdew and Goldstein 1989, 615), but it also imposes a critical responsibility upon the discipline: as a consequence of its pedagogical role, its familiarity with the theories and methodologies employed by the industry, and its increasingly sophisticated understanding of the spatial constitution of relations of power in contemporary society, I believe that geographers are best positioned to make a systematic challenge to the instrumental rationality that is behind geodemographics.

Electronic Consumer Data Bases

> What power needs is not science but a mass of information which its strategic position can enable it to exploit. (Foucault 1980, 75)

Most individuals generate electronic data as they provide information necessary to conduct a multiplicity of transactions with bureaucratic-administrative and commercial institutions in their everyday lives, while the same institutions undertake systematic observation of contemporary social life in order to further their interests and enhance their capacities for social control and profit-making. "Infopreneurs" (Weitzen 1988) are able to accumulate and cross-reference enormous quantities of this information by purchasing records from private institutions and ransacking public records in order to construct their massive Marketing Customer Information Files. Erik Larson calls this systematic accumulation of individual and aggregate data about persons "consumer espionage" (Larson 1992, 5), and certainly the means are sometimes devious. Profiles of consumers are compiled with data obtained without consent from diverse sources, including the aggregate records of the U.S. Bureau of the Census and individual records in local government offices responsible for vehicle registration, driving licenses and property transactions, police crime reports, and certifications of births, deaths, and marriages; the household address records of the U.S. Post Office; the public transac-

tion records of private institutions such as banks, insurance companies, and health services provided in compliance with regulatory requirements; individual transaction records provided commercially by credit bureaus, large retailers, and list brokers; and commercially available personal data derived from purposive research on consumer behavior, such as panel studies, syndicated media reports, and life-style and psychographic segmentation profiles.

Records from these various sources are analyzed in order to append data to existing customer records (new data is added on the basis of address matching) and to overlay aggregate data (unknown individual characteristics are inferred from aggregate data on the basis of address). The scale is enormous. Claritas, Inc., for example, "crunches data on more than 100 million American households from credit bureau files, car-ownership banks, census records, purchasing surveys, and dozens of other public and private services" (Roberts 1992). R.L. Polk's *Totalist*, a listing of 95 percent of all households in the United States (90 million households and 150 million individuals) is the largest consumer data base ever compiled and combines 20 separate data banks, including vehicle registrations for most states, monthly new car and truck buyers, credit card usage, home-ownership records, and proprietary demographic and consumer life-style data. National Demographics and Lifestyles's (NDL) Lifestyle Network is built by collecting the point-of-purchase records or postpurchase warranty cards of clients, which are then followed up with customized surveys containing a list of proprietary questions, together with questions specific to the interests of the client. NDL reports to the client, but also keeps this demographic and life-style data for its own use (NDL 1992a). NDL's huge individualized data base is presently unique, but sufficient consumer data is being generated and accumulated by geodemographic corporations that several others are being developed, including Equis by National Decision Systems and DQI[2] by Donnelly Marketing Information Service (DMIS) (Curry 1993, 264).

The Issue of Privacy

> We and a couple of hundred other companies are going to appropriate your name, match it, store it, rent it, swap it; we'll evaluate your geodemographic profile, determine your ethnic heritage, calculate your propensity to consume. We'll track you the rest of your consuming life, pitch you baby toys when you're pregnant, condos when you're fifty. In return for the use of your name, we won't pay you a penny. (Larson 1992, 100, original in capitals)

The capacity of geodemographics to sell intimate knowledge on consumers has led to expressions of concern in the media (see, e.g., Schwartz 1991; Miller 1991; "No Hiding Place" 1993; WGBH Boston 1992; M.J. Smith 1993; R.E. Smith 1992; Flowers 1993); to legal actions and informational campaigns by organizations such as the American Civil Liberties Union and Computer Professionals for Social Responsibility (these organizations were instrumental in halting the development of the product Lotus Marketplace, which would have provided, at a modest price, credit and other intimate forms of data on 120 million households (see Gandy 1993, 93)); and to the development of specific advocacy groups such as Privacy Rights Clearinghouse, the Stop Junk Mail Association, and Privacy International (see Lyon 1994, 177). There is evidence of an increasing level of awareness among the general public of the threat to personal privacy that target marketing may constitute. A study by Louis Harris and Associates as early as 1984, for example, found that the majority of the general public believes that computer data bases are a threat to privacy (Mendes 1988, 193). By 1991, almost half of those surveyed were "very concerned" and almost one-third claimed to have foregone services in order to protect their privacy

(Larson 1992, 209). Other polls have produced similar results (see Nowak 1992, 29).

Marketers argue that "dataveillance" (Clarke 1988) is the necessary quid pro quo of participation in a consumer society (Robbin, cited in Larson 1992, 55) and that, while privacy is not explicitly guaranteed by the U.S. Constitution, the promotional activities of businesses are protected by the First Amendment (Posch 1988). Certainly, privacy is a difficult concept, culturally specific and politically contested. It can be conceived, however, as an extrinsic value that provides the conditions for the enjoyment of other rights (Muthuchidambaram 1988, 194), particularly for the exercise of the freedom of action and association critical to self-actualization, or the realization of individual identity. Information technologies threaten privacy when the release of records about an individual's behavior or beliefs "unnecessarily" or "unjustly" compromises that individual's identity. This occurs under two conditions relevant to geodemographic information systems.

First is the possibility of error in data bases, so that even if the use of the particular data by an institution is legitimate, its inaccurate application negatively affects the consumer's welfare. This is particularly the case with credit records (Mendes 1988, 264), but also includes the unfortunate invasions of privacy imagined by Larson (1992, 11), where marketers target with "lavender teddy bears" a family grieving the loss of a young child (see also Paulson 1988). The provisions of the Privacy Act, the Freedom of Information Act, the Fair Credit Reporting Act, and the Equal Credit Opportunity Act allow individuals access to personal records to check their accuracy and permit individuals to file lawsuits should they be negatively affected by incorrect information, but this legislation places the responsibility upon the consumer, and necessary corrections are extremely difficult to make throughout the system once records have been exchanged between data bases. Moreover, the provisions of these legislative acts have been interpreted increasingly less favorably for individual citizens during the last decade or so (Paulson 1988; Lyon 1994).

Second is the application of personal data collected legitimately in the context of one social relationship to other contexts without express permission, particularly when this leads to the combination of elements of identity which the individual would rather be kept separate. The provision of personal data to private and public institutions is arguably a necessary condition of modern life, and few consumers apparently object to providing personal information in order to obtain utility services, credit, insurance, employment, or welfare payments (Wang and Petrison 1993; Nowak 1992). The problem rather is the transfer of this data to institutions unconnected with the service, and particularly the developing complementarity of interests between public institutions and private corporations in maintaining geodemographic information systems. Under the contemporary "mode of information" (Poster 1990), or alternatively "cybernetic capitalism" (Robins and Webster 1988), administrative control of social life by the state is facilitated by the systematic surveillance of consumption by private capital, while the administrative control of consumption by corporations is facilitated by the systematic surveillance of social life by government. Geodemographics is one of the new information technologies that has enhanced the capacity of state and capital for the "control of information and superintendence of the activities" of citizen-consumers (Giddens 1985, 2), further reinforcing Lefebvre's (1971, 60) notion that we live in a "bureaucratic society of controlled consumption." Geodemographics is thus, I believe, one of Poster's (1984, 115) "new modes of domination that have yet to be studied," a potentially powerful tool among the normalizing technologies of "surveillance society" (Flaherty 1988; Gandy 1989).

Many government agencies now use commercial data sources to obtain information on individuals (Roszak 1986, 183),

including the IRS, which has used private credit card data bases to check on the spending habits of individuals suspected of tax evasion (Gandy 1989, 70), and the U.S. Selective Service, which used rented lists to identify males soon to turn 18 years old (Larson 1992, 99). Similarly, commercial data vendors avail themselves of public records, from the aggregate demographic data published by the U.S. Bureau of the Census to unpublished individual records of property transfers and motor vehicle licensing. Government agencies have realized the commercial value of the data they gather for the purpose of public administration and sell data to offset the costs of production. Both the U.S. Bureau of the Census and the U.S. Postal Service have provided privileged access to their data to information conglomerates, allowing private interests to profit from a socially produced resource (Russell 1984; Larson 1992, 94).[2] Local governments have initiated programs in what Castle (1993, 96) calls "the business of government"—that is, the selling of their information to private users and negotiation of contracts with companies that create and maintain data bases in return for rights to sell this information to other clients. The project to create a National Information Infrastructure to explicitly facilitate exchange of private and public data, ostensibly in the national interest, promises to institutionalize this practice.

Legislation restricting the unauthorized release of personal data by public and private institutions includes the Privacy Act, which regulates disclosure of individual records by the federal government; the Right to Financial Privacy Act, which limits its disclosure of records by financial institutions; the Cable Communications Act, which requires cable companies to inform subscribers of the records they keep; and the Video Privacy Protection Act, which prevents disclosure of rental information to unauthorized third parties. The latter, in particular, indicates the ad hoc nature of legislative response (Larson 1992, 238–39), and the one thousand or so pending state and federal bills covering telemarketing indicate how piecemeal the process is (Wang and Petrison 1993, 8).[3] The protections provided in existing and proposed laws are seriously circumscribed by exemptions, ambiguities, and contradictions, and application-specific regulations are rapidly made obsolete by the rapid development of information technology (Gandy and Simmons 1986; Mendes 1988, 195–97). Existing laws protect the procedural rights of individuals rather than preventing the collection and compilation of information per se (Brown 1990, 75; Lenk 1982). Consumer advocates therefore argue for more comprehensive measures that would establish the privacy of personal information as an inalienable right, or at the least ensure that statistical identities belong to the individual as personal property over which they have rights of alienation (Larson 1992; Brown 1990, 106).

It seems likely that data base managers will have to adapt to a society increasingly protective of the confidentiality of personal data (Rhind 1992, 263; Hughes 1991, 431). The geodemographic industry, with a few extreme exceptions (see Posch 1988; Sherman 1991), generally recognizes the need to compromise with consumer advo-

[2] The Census Bureau has provided special ZIP-code tabulations of data and the Post Office licenses use of the National Change of Address Masterfile, in both cases to a limited (and overlapping) number of data merchants (Larson 1992, 45, 94).

[3] The Video Privacy Protection Act was passed in 1988 as a result of the Senate Judiciary Committee hearings on the nomination of Robert Bork for the Supreme Court, after the video rental records of the federal judge were published by a Washington weekly, *City Paper* (Larson 1992, 235). Ironically, Bork had argued against the existence of a right to privacy during the hearings, and his cinematic tastes were rather bland anyway. Nevertheless, some senators felt threatened by the ease with which this data was obtained, and legislation was hurriedly passed.

cates voluntarily to allay public fears (Jones 1991; Fost 1990; Wang and Petrison 1993) and to preempt protective legislation (Hughes 1991). The Direct Marketing Association, for example, offers a Mail Preference Service and will, upon request, inform its members of the names of individuals who would like to be removed from mailing lists (compliance is voluntary, of course). Many service providers also now provide options for individuals to request not to have their names sold to other parties. Providing a means to "opt out" in small print is not, however, the same as seeking informed consent, since consumers may be unaware that such an option is available without penalty—as is often implied, for example, in widely used warranty-card surveys (Nowak 1992)—and it would be extremely hard to police (Wang and Petrison 1993).

Since the industry must maintain access to consumer information, it seems likely that it will adopt three alternative strategies in response to public criticism and potential legislative limitations on its activities. First, it will likely continue to collect data as a condition of service such that the consumer may refuse to give information only by nonparticipation. Individuals who participate in interactive cable and Electronic Funds Transfers (e.g., automated teller machines, automated clearinghouse services, point of sale transfers, and credit cards) are presumed to do so on the understanding that information will be selectively sold for marketing applications and that this partially subsidizes the cost of the service, although surveys have found that many consumers are still not aware of the extent of this practice (Wang and Petrison 1993; Nowak 1992). Ongoing informational campaigns by consumer advocates and privacy rights activists should force the industry to decrease this deception, to expect only information essential to the provision of service, and to limit the use of this data without penalty to consumers.

Second, data merchants might compensate consumers for information by offering incentives such as more "personal" service, entry in lotteries, free gifts, and even, for the socially conscious consumer, contributions to charities.[4] The problem with this solution, which is the organizational goal of some advocacy groups (Jones 1991), is that it is also difficult to police and it seems unlikely that those whose geodemographic identities are used to exclude them from a marketing campaign would receive compensation.

Third, given consumer resistance to unobtrusive research methods and the cost of these incentive schemes, market researchers will probably continue to rely on statistical models and spatial inference to determine consumer characteristics and to identify prospects. The question then is whether it is an invasion of privacy in the conventional sense for marketers to assume that an individual shares behavioral characteristics with another who has willingly provided information and therefore is also willing to receive, or to be excluded from, solicitation for similar services. The case of the individual whose privacy is not actively invaded by the marketing message, but whose name is nevertheless used in geodemographic analysis, illustrates that the issue is not privacy per se, but the capacity of marketing organizations to marshall, cross-reference, and analyze relatively innocent, and even public, information on individuals and aggregations of individuals in order to obtain social power over them (Lenk 1982, 284). As Foucault (1979) argues of the development of the Panoptican, it is not so much the operation of the specific instruments of surveillance technology upon even a minority of subjects that should be our concern as much as the manner in which the surveillance

[4] On one form, for example, a market researcher promises: "To show our appreciation for the return of this information, W.L. Gore & Associates, Inc. will make a contribution to the SPECIAL OLYMPICS in the name of all the people who have generously given their time to fill out and return this questionnaire" (NDL 1991a).

sciences discursively constitute social subjects in disciplinary society (Goss 1994).

Extending Foucault's metaphor for the disciplinary society, it has been suggested that information technology constitutes a Superpanoptican, a system of surveillance that transcends physical and institutional structures (Poster 1990, 121; see also Deleuze 1992; Gandy 1993). The technology is still spatial, however, in the sense that it involves the precise geographic location of individuals, the systematic monitoring of their behavior, and the scientific construction of their identity as social objects from a privileged subject *position* (Goss 1994). Electronic surveillance and the constitution of consumer identity within information technologies still *take place*, and the role of GIS is critical to this process.

Geographic Information Systems

> With *geo*market analysis software, marketing professionals can immediately see *where* their customers are, quickly change variables, see the results displayed *geographically*, and present the results or decision criteria in an "*at a glance*" format. (Scan/US 1994, 1, emphasis added)

GIS is a combination of spatial data base management and spatial analytical tools with computerized cartography. It is estimated that 85 percent of information in corporate data bases has geographic attributes (Baker and Baker 1992, xv), and GIS facilitates both the accumulation of information about geo-coded objects (Moloney 1993, 107) and the manipulation of this spatial information—for example, by assigning objects to geographic areas, extrapolating trend surfaces, and computing spatial statistics. The graphic component is critical for the visualization of data and the communication of complex marketing relationships (Baker and Baker 1992, 10; Curry 1993, 242).

Geodemographics is built upon the assumptions of the ecological model of urban social sciences that residential location reveals primary social and cultural characteristics of individuals and groups. The address of the consuming household is further useful, however, as a means of matching records and is the major actionable variable in the data base, since it identifies and locates the "target." GIS facilitates the matching of addresses with center-line geographic files such as those produced by the U.S. Bureau of the Census to locate individual addresses accurately on digitized maps. Address coordinates can then be allocated to units in particular geographies, such as to postal carrier routes or priority codes (ZIP + 4) for generation of discounts on bulk mailings; to census tracts or blocks in order to facilitate demographic overlays; to television-viewing areas such as Arbitron's ADI (Area of Dominant Influence) and A.C. Nielson's DMA (Designated Marketing Area) in order to design advertising campaigns; or to custom geographies such as store trade areas or sales representative territories in order to optimize retail location and allocation.

Contemporary geodemographics depends upon the accurate digitization of census geographies, such as TIGER, the development of which has been partly motivated by commercial interests (see Larson 1992, 41–42, 45–46).[5] More recently, the Mapping Science Committee of the National Research Council has proposed the construction of a National Spatial Data Infrastructure (NSDI) to replace the present fragmentary, ad hoc collection and application of spatial data. The NSDI would involve the development of a national policy for increased

[5] The TIGER (Topologically Integrated Geographic Encoded and Referencing) system was developed by the Census Bureau and the Geological Survey for the 1990 census. It is a computerized map data base for the United States that provides the coordinates and common names of line features, landmarks and polygons (such as census or administrative boundaries), and includes street address ranges and ZIP codes. It is used to identify and allocate addresses to census units and with a compatible GIS may be used to generate thematic maps of census data.

information development and sharing by a coalition of private and public institutions (see Morrison 1993), exploiting the "coordination, linkages, and information 'flows' that are made possible by the *application-neutral* character of digital spatial data and the power of computers" (Mapping Science Committee 1993, 15, emphasis added). This is nothing less than a national priority for "survival in an increasingly global economy, dominated by ever larger private-public sector coalitions in countries outside the United States" (Mapping Science Committee 1993, 6).[6] One can only imagine the surveillance potential of private-public institutions with access to the combined data of the proposed National Information Infrastructure *and* National Spatial Data Infrastructure.

Despite the promises of these developments, a number of technical problems are associated with the spatial analysis routines of geodemographic systems, which, although discussed in the academic GIS literature (Martin 1991), are mentioned only briefly in most independent handbooks (Hughes 1991; Holtz 1992; Baker and Baker 1992; Curry 1993) and are not acknowledged at all in the promotional or instructional literature. For example, there is the relatively minor, but expensive, problem of accurate address matching, given the idiosyncrasies of address reporting and data entry (Hughes 1991, 295–96). A number of companies offer software that matches addresses in data base with postal addresses using probabilistic functions, replacing the intuition and experience that postal workers have traditionally relied upon. These companies also update addresses periodically by checking them against the National Change of Address master file kept by the U.S. Postal Service to minimize undeliverable mail, or "nixies." Even if marketers are then confident of the accuracy of the address record (R.L. Polk, for example, refunds returns above the standard 4 percent on first class mail and 7 percent on second class mail), there remains the technical difficulty of assigning addresses to geographic areas, or the "point-in-polygon" problem that arises from errors in the digitization of boundaries (Blakemore 1984). These errors might not affect the deliverability of bulk mail, but they will certainly compromise the validity of some marketing research.

More serious, however, are the assumptions made about the spatial distribution of social phenomena within geodemographic systems that allow for the "overlay" of individual consumer records with aggregate demographic data. This methodology presumes that relationships observed in spatially aggregated data are representative of relationships at the level of the individual consumer. The modifiable areal unit problem, however, occurs as a result of the arbitrary nature of statistical boundaries, and particularly the scale and form of the units of aggregation, such that patterns observed in the data may result from the choice of aggregation method as much as from the distribution of social life itself (Martin 1991, 59). The related ecological fallacy is perhaps the most serious technical problem affecting spatial analysis in GIS. This refers to the erroneous assumption that patterns or relationships between data observed at an aggregate level of analysis also apply to data at the level of the individual (or to any lower level of aggregation). Census data and some other forms of geodemographic data (such as vehicle license data) are available only for aggregate spatial units because of confidentiality requirements, and inference of individual characteristics from aggregate statistics is possible only if the distribution of characteristics in the underlying population is uniform or otherwise known.[7] This is a fun-

[6] For example, in Britain the appropriately named private geodemographic corporation, Pinpoint Ltd, in cooperation with the General Post Office, is digitizing every single address in the U.K. that receives mail on a national grid, accurate to one meter (see Catrell, Dunn, and Boyle 1991).

[7] The U.S. Bureau of the Census does, of course, release individual-level data in its three types of Public Use Microdata Samples

damental problem for the statistical analysis of demographic data, and I will return to this below, but it also presents a problem for GIS in that it is possible to reassign individual values from aggregated values based on geographic areas, such as census block groups, to new units of aggregation, such as ZIP code areas, only under the assumption that they are distributed homogeneously (Martin 1991, 142).

The technical problems of spatial analysis in geodemographics might be ameliorated by further improvements in the rapidly developing technology—a concern of some academic geographers (for example, Openshaw 1989)—but a more profound ontological problem lies in the conception and representation of social space on which GIS is based.

GIS and the Representation of Social Life

I have argued elsewhere (Goss 1994) that geodemographics is *strategic* in the sense employed by de Certeau (1984, 35–36). *Strategy* is the will to power that establishes for itself a privileged place from which to survey and manage the life of the Other, in this case the consumer. Its technique is statistical: it seeks to control the uncertainties of everyday life by partitioning the world into readable spaces for systematic observation, prediction, and rational planning based upon probabalistic knowledge of outcomes (de Certeau 1984, 34–35). It necessitates a territorialization of social life and the assignment of objects to their proper place in the spatial order for the purpose of surveillance and administrative control (Foucault 1984, 254; Lefebvre 1976, 113).

GIS constructs a layered representation of reality in which geo-objects are defined precisely by their location in absolute space and by their thematic attributes, or measurable characteristics, which are linked to their coordinates. This is a quintessential representation of space, a rational conception based upon grids, boundaries, and the functional segregation of natural and social life (Lefebvre 1991). It is the space of the administrative sciences, which postulate a reality that is objectively observable, measurable, "mappable," and ultimately predictable by location. It is simultaneously an enactment of power-knowledge over social space (de Certeau 1984, 36; Matless 1992, 46).

This representation, of course, precedes GIS in the cartographic imagination (Harley 1988, 1992), and it draws upon established administrative spatializations of the state, such as those developed by the U.S. Bureau of the Census or the U.S. Postal Service. Like cartography, GIS provides an abstract model of reality, and the user occupies a privileged Archimedian position outside of the representation from which to observe and strategize the control of territory. GIS, however, is simulational as well as representational, and the user is able to manipulate the model to create "what-if" and "show-me-where" scenarios (Strategic Mapping n.d.) that transform the representation. Like other contemporary visualization technologies (Haraway 1992, 298), it allows the user to interrogate the model, to "play" with the spatialized order to construct a more efficient reality in a god-like manner (see also Bondi and Domosh 1992, 202). As I have shown elsewhere (Goss 1994), the promotional discourse of GIS is consequently replete with metaphors of vision, insight, omniscience, prediction, manipulation, and control.

The growth of GIS marks a "resurgence of positivism" in geography and planning (Pickles 1991; Lake 1993), providing a new lease on life for spatial science characterized by quantitative modeling of behavior to predict and efficiently manage social life. In addition, given its power to represent the "terrain" of social life objectively—that is, to locate social objects precisely in absolute space and to rehearse complex scenarios—its discourse

(PUMS), but this is available only for geographic units of 100,000 persons or more, a scale that is generally too coarse for geodemographic analysis.

is also marked by a dramatic deployment of military metaphor. GIS has been of some utility to the armed services in logistical planning and conflict (N. Smith 1992), and the discourses of both electronic surveillance technologies and marketing are themselves strongly influenced by military science, so it is perhaps not surprising that in geodemographics the consumer is conceived not only as the Other of technocratic rationality, but as the strategic enemy of its intelligence (Goss 1994). As a consequence, the goal of spatial analysis and representation in geodemographics is the occupation of social space by the means and metaphors of war (see also Lefebvre 1991, 366).

If the GIS component of geodemographics provides a means for the systematic surveillance of consumers as Other and Enemy and the precise mapping of their location as targets on the marketing terrain, the strategy is not complete without detailed *intelligence* of their identity, disposition, and vulnerabilities. This in turn is the function of the segmentation of consumers, which provides the means to specify appropriate strategies to be taken against them.

The Segmentation of Consumer Identity

> NDL FOCUS gives you the most comprehensive "living" portrait of your customers . . . beyond demography and geography. In remarkable detail, it reveals their life-style and mindset. (NDL 1993b)

The cluster analyses of geodemographics typically classify "250,000 block groups" (see Curry 1993, 215, n. b), or "23 million ZIP+4s" (Equifax 1991), into "neighborhood types" based on aggregate demographic data. It works upon the assumption that households resident in these areas are relatively alike, and that they are similar also to households in other areas that exhibit the same scores on aggregate demographic variables. Most importantly, it assumes that households with related demographic profiles share purchasing habits, product preferences, and patterns of media use.

The precise algorithms used by the major geodemographic information systems (for example, ACORN by CACI, PRIZM from Claritas, Inc., ClusterPLUS from Strategic Mapping, and MicroVision by Equifax NDS) produce somewhat different clustering schemes (see Curry 1993, 207). The algorithms are proprietary, making methodological comparisons difficult (Openshaw 1989, 114), but they are all similarly based on a factor analysis of census or customer data, which first eliminates redundancy in the 150 or so variables. This is followed by a centroid clustering of neighborhoods on the resulting factors, allowing the division of the United States into 40–50 neighborhood types, this "round" number perhaps based more on the ease of use and competitive pressures than on validity criteria (Curry 1993, 225). The neighborhoods can then be identified by their principal characteristics and given "clever" names descriptive of the demographic identities of consumers living there (Curry 1993, 206), or at least of marketers' stereotypes of their residents. R.L. Polk's Kidsbase, for example, contains "Mid-Life Munchkins," "Big Spenders," and "Parentis Singularis," while PRIZM from Claritas, Inc. includes segments called "Furs and Station Wagons," "Pools and Patios," "Shotguns and Pickups," and "Norma Rae-Ville." Descriptions of consumer life-styles are often accompanied by photographs or artists' sketches of the stereotypical resident-consumer, captured during a moment of everyday life in his or her neighborhood (see Fig. 1).

There are several problems with the use of census data for this purpose. First, the census of population and housing is conducted only at decennial intervals, and the composition of neighborhoods may well change more rapidly (Flowerdew 1991, 6). In order to alleviate this problem geodemographic corporations provide regular demographic updates, which can even be downloaded on-line, but the wide range of estimates involved in the updates by different geodemographic companies sug-

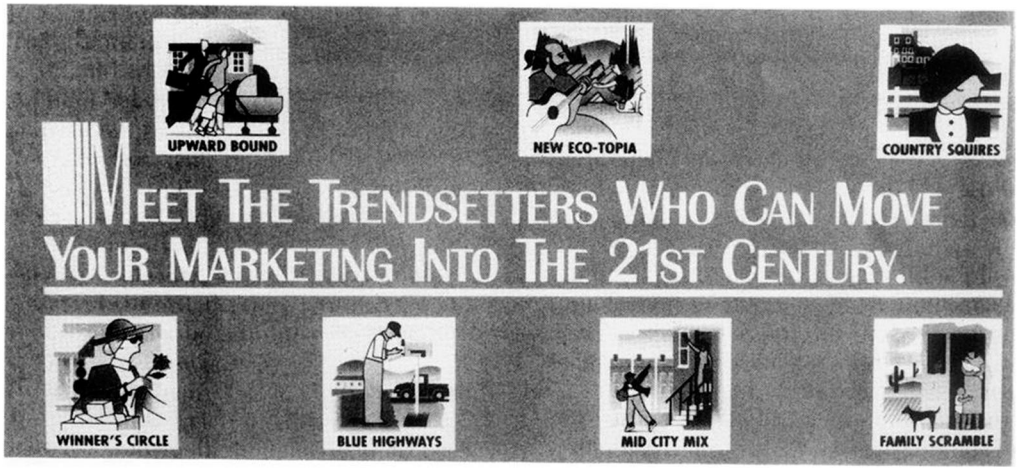

Figure 1. Examples of the 62 clusters from PRIZM-The Next Generation. *Source*: Detail from a Claritas (1994) brochure. Claritas, Inc., Arlington, VA. PRIZM is a registered trademark of Claritas, Inc.

gests that this is a speculative enterprise (Chapman 1987). Segmentation schemes are also revised periodically; Figure 1, for example, is a detail of a brochure anouncing the release of Claritas's PRIZM-The Next Generation, which claims to deliver 50 percent more marketing power than the previous system and to meet marketers' needs into the next century (Claritas 1994). The U.S. Bureau of the Census, however, upon which geodemographics relies for its basic aggregate-level data, is notoriously slow to adjust its research methods and instruments to accommodate changes in the structure and behavior of the population, and I suspect that most segmentation schemes are similarly outdated.

Second, the clustering of census data by itself provides marketers with only a "nodding acquaintance" with residential stereotypes (Wells 1975, 196), and in order to "put flesh" on the demographics (Nichols 1990, 5), psychographics and other consumer characteristics must be incorporated into the proprietary segmentation schemes. Exploiting the numerous contractual links that have developed between data merchants, marketers can cross-reference any of the major clustering schemes with several of the large syndicated national consumer data bases, including National Family Opinion Research's consumer panel surveys (300,000 households), Simmons Market Research Bureau's media and markets surveys (38,000 households), and SRI International's VALS™ (Values and Lifestyle) surveys.[8] Numerous other syndicated data bases have also been cross-referenced with one or more of the major segmentation schemes, including Gallup's opinion polls, Mediamark Research Inc.'s magazine and newspaper readership surveys, TRW's Information File (credit records for 138 million people), A.C. Nielson's and Arbitron's television viewership surveys, and InfoScan's scanner panel surveys (see Curry 1993, 261).

Clusters are then defined in terms of brand preference, media habits, financial exposure, life-styles, and values. Market-

[8] SRI International has recently developed its own geodemographic segmentation of the United States. The GeoVals algorithm provides estimates on the composition of each ZIP code in terms of its eight VALS categories (SRI International n.d.). VALS™ is a trademark of SRI International.

ers can provide detailed "snapshots" of neighborhoods used for prospecting for new customers, calculating product penetration, conducting direct mail campaigns, or modifying retail geography to optimally achieve marketing goals. For example, neighborhoods across the United States can be ranked according to their likelihood to purchase particular commodities or services, expressed in terms of a "potential market penetration index," which allows marketers to "precisely quantify, locate, and target [their] most profitable customers and prospects" (Equifax 1991, 5). Ironically, geodemographic discourse promises a means to overcome the progressive depersonalization of consumption, particularly the loss of the retailer's practical knowledge of customers, that has accompanied the development of modern mass marketing. Geodemographics and data base marketing are said to restore the intimate everyday contacts with patrons traditionally enjoyed by neighborhood grocers before the advent of modern retailing and mass marketing (Holtz 1992; Hughes 1991; DMIS 1993), and the promotional literature claims that marketers will once again be able to "thoroughly understand [their] customers and prospects" (Equifax 1991, 3), see "how [their] customers view themselves" (NDL 1991b, 2), and "use the language that will appeal to each segment" (SRI International n.d., 3).[9] The Cohorts® segmentation system from NDL, for example, claims to go beyond geography and demographics to provide "character: not just characteristics" in its "accurate, multidimensional portraits of *real people*" (NDL n.d., 2). The 33 cohorts are each identified by the first names of real people most characteristically associated with the cluster so that marketers can "meet [their] customers on a first name basis" (NDL 1993a, 2). A "vignette" from the everyday consumer life of each cohort identifies them for the marketer (Fig. 2).[10]

The rhetoric of intimacy is ironic because geodemographics is an exemplar of what Jacques Ellul calls "technical propaganda" (cited in Gandy and Simmons 1986, 156), a system that, on the basis of a scientific understanding of the human psyche (attained via demographic and psychographic segmentation), communicates with the masses collectively (e.g., by discounted bulk mail) but appears to address each individual personally (e.g., by a computerized selective stuffing of mail). The ultimate irony, however, is that geodemographic marketing, while appearing sensitive to the fragmentation of consumer identities and the proliferating demands of contemporary customers (Swenson 1990, xv–xvii), is also a means to order and manage diversity effectively and ultimately to (de)limit those identities and demands in

[9] It is appropriate here to note the gendered nature of geodemographic discourse, although I have discussed this elsewhere (Goss 1994). The tropes of intimacy and seduction of the consumer as woman are perfectly illustrated by Jonathan Robin's conceit, as reported by Larson (1992, 31), that his work as a "geodemographer" is akin to being married to a beautiful woman, when every night he discovers something new about how lovely she is. Equally sexist, however, is Larson's critique of geodemographics, in which he constructs his own wife as the passive dupe of the mail order industry and himself as a valiant knight battling to protect her and his family against its solicitations. The resulting image of corporate (masculine) villainy and individual (masculine) heroism engaged in combat for (feminine) virtue is a comical cliché, although the protagonists take themselves, if not the consumer, very seriously indeed.

[10] In the United Kingdom, where first names are even more revealing of age and social class, first names are used for predictive purposes. CACI's MONICA is based on 13,000 different first names registered in the national electoral roll. The combination of names within a household, controlled for region, is a good indicator of age, and the age profiles in combination with CACI's geodemographic segmentation scheme, ACORN, can be used to predict probable composition and life cycle stage of households in order to target consumers more precisely within neighborhood segments (see Humby 1989, 65; Beaumont and Inglis 1989, 591).

Kurt & Heidi

Married Households
Renters
Median Age = 31
Median Income = $29,407
% U.S. Households = 1.1

Young, married couples with **no children**, along with **newly formed families**. Four out of ten have **children, mostly under 4 years old**, and 40% are **dual income** households with no children. Thus this Cohort may be a "transitional" Cohort, within which many couples are having their **first child**. Almost two thirds live in **townhomes** or **condominiums**; this fact, combined with the number of new parents, may make this Cohort a prime target for new home purchases. These households enjoy an extraordinarily broad range of interests and activities, with especially strong affinities toward **technology**, the **outdoors**, and **active domestic** interests. Outdoors they enjoy **camping, hiking, fishing, motorcycling**, and **wildlife**. At home they tend to their **automotive** and **home repair, collections, crafts**, and **needlework**. In general, they prefer **economy cars** and **subcompacts**. These households are over-represented throughout the **western U.S.** and the **south**.

Vignette

For any household, moving day can be a much-dreaded event, but for Kurt and Heidi it was downright traumatic. How in the world did they accumulate so much stuff in just three short years of marriage? If it weren't for their friends, they would have never made it. Not only did their truck reduce the number of trips to the new place, but they helped Kurt and Heidi recognize several boxes of "important" things as junk. Still, all Heidi's wreath-making gear, Christmas ornament supplies, and sewing machine took up half a truckload. When Kurt started to complain, she pointed to his pile of camping gear, tool boxes, and that old sink he's been lugging around in hopes of building his own darkroom someday.

Like most people, with every box they unpacked in their new place they vowed never to move again. With every nail they drove through the freshly painted walls they swore this was it, Home Sweet Home Forever. By the time they're ready to start a family, though, they'll need a bigger place. Their own house, where they can build shelves and cupboards and a workshop—without worrying about the landlord's approval. But that's it, that will be the last time they ever move. Really.

Cohorts® Segment 9

Figure 2. An example of the "character" of Cohorts®—a vignette from the segmentation scheme of National Demographics & Lifestyles. *Source:* National Demographics & Lifestyles (n.d.) brochure. National Demographics & Lifestyles provides comprehensive database development, database consulting, research and direct marketing services to leading consumer goods companies. NDL's targeted list performance services improve direct mail response.

the interests of the producer. The rhetoric of intimacy and empathy conceals an intent to control.

Geodemographics and the Construction of Consumer Identity

> The internal logic of these processes (statistics, probabilities, operational cybernetics) is certainly rigorous and "scientific," yet it somehow doesn't get any purchase on anything, it is a fabulous fiction whose index of refraction in (true or false) reality is zero. This condition is all that gives these *models* any force, but the only truth it leaves them comes from paranoid projection tests of a caste or group, undecideability dreaming of a miraculous adequation between the real and their own models, and therefore an absolute manipulation. (Baudrillard 1988, 56)

Whatever the rhetorical claims of the promotional discourse of geodemographics, the identity, or character, of individuals is reduced to their measurable characteristics as defined by secondary data sources, unobtrusive observation of consumer behavior, and specially commissioned attitude surveys. Segmentation analysis of demographic and psychographic variables is an attempt to reduce the complex nature of consumer motivations and predispositions to patterns in digital data. It is a part of the impossible strategy of economic reason—"to exteriorize interiority, or objectivize the subjective," to reduce the subjectivity of the individual to the social identity with which she or he is provided (Gorz 1989, 176–77).

In geodemographics data are aggregated, correlated, and collapsed into a number of statistical types that adequately summarize patterns in quantitative data (typically capturing about 85 percent of the variance). The "black box" mechanics of the analysis are probably little understood by most marketing executives, and the resulting abstractions or clusters are not consistent with their commonsense understanding of consumers, so geodemographics provides them with coherent and consistent identities—or "soap operatic" characters (Goss 1994)—that fit with their own stereotypes. There is, of course, always a subjective element in the identification or naming of the groupings produced by cluster analysis, but in geodemographic systems great liberties are taken with the methodology to provide for the marketer elaborate consumer identities complete with first names, fictional slices of family life, personal dreams, and social weaknesses. Dressed as a precise science—the promotional discourse of geodemographics is replete with metaphors of precision (see Goss 1994)—the methodology constructs consumer identity as a highly subjective marketers' abstraction. The detailed "portraits" of consumer characters created by market researchers are apparently compelling to marketers precisely because they conceive of social identity as a consumption life-style that is vulnerable to the manipulations of the industry. NDL (1993a, 2), for example, nicely suggests the marketers' vision of social life when it claims that "as you get to know [cohorts], you'll discover these are all people you know: your friends, neighbors, relatives, and—most importantly—your customers."

This is not the place to undertake an extensive critical review of the concept of life-style, nor to document how the sociological concept of "style of life" after Max Weber, among other social science theorists, has been (mis)appropriated by marketing research (see Wrong 1990; Giddens 1991, 81). The geodemographic literature, however, reveals a problematic conception of social identity as a coherent and relatively stable life-style project organized around a particular mode of consumption. The statistical and stereotypical fictions of segmentation belie the contingent, fragmentary process of contemporary identity formation (Featherstone 1991; see also Brown 1990, 75), or rather they present a normative alternative, a model of consumer identity consistent with the productivist organization of the social relations of consumption.

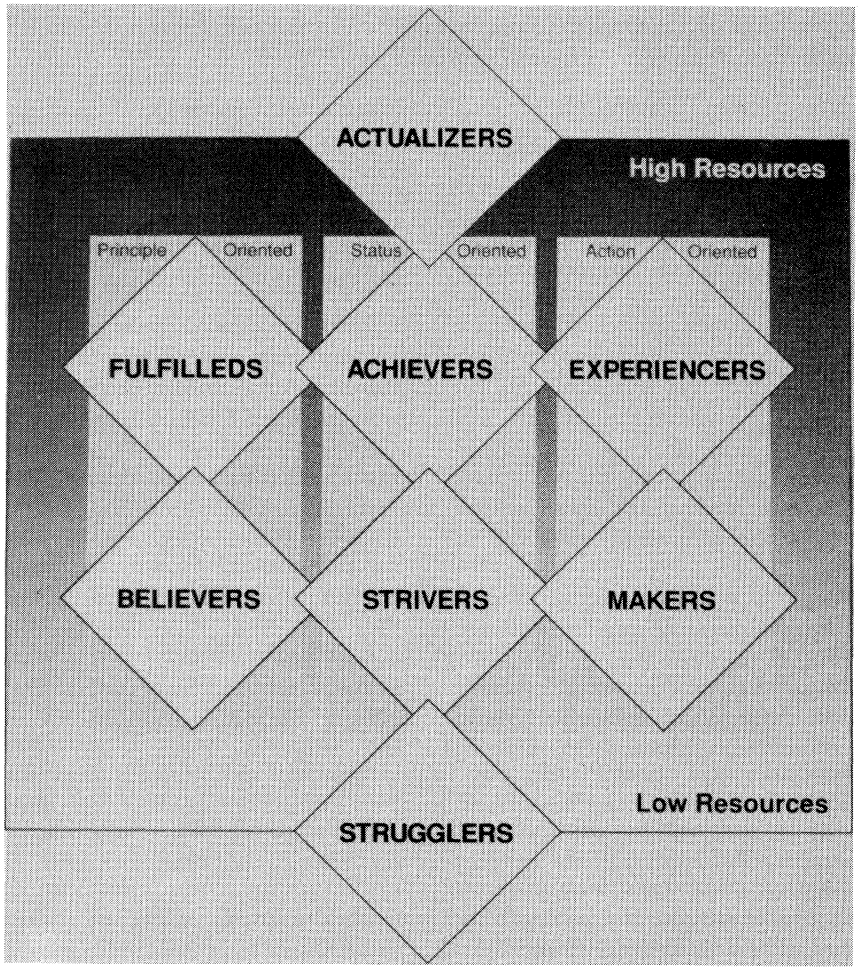

Figure 3. The socioeconomic structuring of consumer identity—the hierarchy of values in SRI International's VALS™2+. VALS™2+ is a trademark of SRI International. *Source*: SRI International (n.d) brochure.

First is the conception of consumer identity as synchronically and diachronically coherent. The consumer is presumed to lead a particular life-style and to consume a complementary set of goods, which conforms more to the desire of marketers to sell particular "constellations of commodities" (McCracken 1988) and to organize consumption's field of meaning efficiently than to the reality of unpredictable and inconsistent purchase decisions that has been described as "consumer schizophrenia" (Kardon, cited in Sampson 1992, 240). Consumer identity is presumed to possess a coherent narrativity characterized by functional development over time, with the consumption of an increasing quantity and diversity of complementary goods. For example, the widely used VALS system presumes the development of consumer identity through discrete stages, from the psychological immaturity associated with "Survivors" to full psychological maturity of the "Integrateds," by either a traditional outer-directed (status-oriented) development route or a contemporary inner-

directed (self-actualizing) route (Mitchell 1983, 26). Passage from one stage to another in this "double hierarchy" of values occurs as individuals satisfy their previous life-style needs (Mitchell 1983, 27). In the more recent VALS2+ system, the progression is from "Strugglers" to "Actualizers" through three routes—principle-oriented, status-oriented, or action-oriented—as these consumers accumulate monetary resources (see Fig. 3). The story of the modern life-style is evidently one of increasing wealth, with the narrative regularly punctuated by predictable events in the life course that change consumer status (births, marriages, home acquisition). This conception has even led to the new marketing "science" of synchographics (Larson 1992, 79–80), the targeting of consumers on the basis of predictive models that allow marketers to preempt life-style decisions, even perhaps to encourage certain preferred outcomes.

Second is the reduction of life-style to consumption behavior or the presumption that "you are what you buy" (Piirto 1991, 233). The social identities created in the geodemographic analysis are defined by the amount and type of goods and services consumed—that is, in terms of their functionality to expanded consumption. In SRI International's classification system, for example, "Actualizers' possessions and recreation reflect a cultivated taste for the finer things in life . . . Experiencers are avid consumers and spend much of their income on clothing, fast food, music, movies, and videos . . . [Makers] are unimpressed by material possessions other than those with a practical or functional purpose (such as tools, pickup trucks, or fishing equipment) . . . Strugglers are cautious consumers . . . a modest market for most products . . . but are loyal to favorite brands" (SRI International n.d.). In the vignettes and cluster descriptions, "positional goods" (Hirsch 1976) clearly distinguish consumer types; for example, ESOMAR, a European market research company, is developing a cross-cultural clustering scheme that measures "economic status" using ownership of selected consumer durables (Quatresooz and Vancraeynets 1992). Marketers naturally have an interest in defining the principal divisions of contemporary society in terms of commodity consumption.

Marketers are more interested in amount of money spent and products consumed than in income earned, and geodemographics is based on the notion that the realms of production, consumption, and distribution have become relatively independent (see Bell 1973), or therefore that life-style is increasingly a matter of choice based on individual values (Mitchell 1983, viii). Strangely, however, residential location—for example, measures of "urbanicity" (Strategic Mapping 1994, vii)—and education, occupation, and income, taken as measures of the relative affluence or "purchasing power" of neighborhoods, all of which are fundamentally constrained by relations of production (to say nothing of race and gender) are privileged variables in the statistical models of segmentation analysis. Geodemographics is then guilty of the "fetishization of life-style," or the representation of consumer life-styles as if they were independent of socioeconomic relations, consistent with a dominant ideology that persistently denies the relationality of the spheres of social life (Laclau and Mouffe 1985).

Moreover, although analysts explicitly argue that their segmentation schemes do not imply any social judgment (Michman 1991, 113), there is in *every* scheme an explicit ranking of segments, where the lowest ranks or highest cumulative scores identify the most affluent consumers. Most of the systems have developed additional means to identify high-spending consumers, by "affluence weighting" their segments; DMIS, for example, uses its "Socio-Economic Status Indicator" as the basis of its Affluence Model, a multiple regression analysis that estimates net worth of any geographically defined area in the United States, based on the census, the Survey of Consumer Finances, and private financial data bases. Greater premiums must be paid for the names of high-spending categories of

consumers; NDL, for example, charges premiums for the names of consumers with real estate interests and high incomes, those who are frequent flyers and casino gamblers, those who donate to charities, and those who own personal computers, cellular phones, camcorders, and CD players (NDL 1993b). Marketers are obviously not equally interested in all segments, and they design strategies explicitly to exclude the segments "that do not fit [their] consumer profile" (NDL 1993c, 11). Geodemographics is used to isolate "deviant" consumers who do not fit the normative model of consumer behavior and to eliminate them from solicitations or service provision.[11] The focus of geodemographics is generally on those "in the fullness of their needs" (Baudrillard 1988, 52). This means, ironically, that less affluent consumers are perhaps less vulnerable to the solicitations of the marketing industry and the invasions of privacy and attempts to control consumption identity that this brings, but of course this is not attained through choice.

As previously noted, geodemographics presumes that social life is spatially sorted by consumption characteristics, or, in the words of Jonathan Robbin, that "humans group themselves into natural areas . . . They create or choose established neighborhoods that conform to their life-style of the moment" (cited in Burnham 1983, 92). This allows the classification of all individuals in society by spatial inference, achieving a total ordering of social life from which no consumer escapes. Such inference, however, is based on the assumptions that households are the basic unit of consumption and that neighbors are more likely to share a set of consumption characteristics than nonneighbors. As a result, geodemographics reifies the address into the primary social unit of consumption; hence "current resident" (Crt) is usually an appropriate recipient for direct mail and the goal is simply "to predict the potential responsiveness of *any address* to future mailings" (Beaumont and Inglis 1989, 601, emphasis added). According to the laws of geodemographics: "You are where you live."[12] The address is critical because the home is the terminus of the circuits of micropowers of consumption; it is the node where the individual is plugged into the commercial communication networks that carry the messages of the marketing industry. The home is a "consumption cottage," or the place where the flows of energy, information, and commodities that disperse the work of consumption converge and penetrate directly into the domestic sphere (see also Putnam 1993, 156).

Ironically, although rapidly developing communication and information technologies are said to be responsible for an "emergent placelessness" (Borland 1988, 147) or loss of the "sense of place" (Meyrowitz 1985), they are employed to locate households within spatialized communities of consumption. Geodemographics partitions social life into life-style areas based on the aggregation of individual characteristics, and marketers target their messages at the resulting statistical identities. Geodemographic discourse consequently also anthropomorphizes ZIP codes, or ZIP code–based segments, speaking of them as if they were possessed of specific tastes and purchasing power. Furthermore, as retailing, financial services, real estate, and media planning increasingly rely on geodemographics to inform their decision making, so an abstract territorialization designed

[11] For example, the Delinquency Alert System service (provided by Credit Bureau Inc.) maintains records on consumers who have defaulted on loans and predicts further risks of delinquency on loans based on the socioeconomic and psychodemographic profile of applicants or their addresses (Gandy 1989, 65).

[12] This is the catchy title of Claritas, Inc.'s ongoing display in the "Information Age" exhibit at the Smithsonian Institution's National Museum of American History.

to increase the efficiency of a specific service is rapidly being reified into the fundamental spatial unit of social life.

The "Truth-Effect" of Geodemographics

> The reified models of the [social] sciences migrate into the sociocultural life world and gain objective power over the latter's self-understanding. (Habermas 1971, 113)

As Giddens (1991, 81) points out, the individual in late-modern society is in effect forced to construct a coherent life-style in order to constitute an identity, and literally to *place* herself or himself within the social order, for "spatially located activity becomes more and more bound up with the reflexive project of the self" (Giddens 1991, 147). In this society, marketing is an organized moral institution whose function is to promote social integration and control through the production of a system of coded values that are employed in the construction of these identities (Baudrillard 1988, 49), and it is increasingly responsible for the spatial ordering of life-styles. It presents a hierarchy of socially sanctioned life-styles and residential locations as models for individuals to select from, consistent within their performative capacities, structuring the possibilities in terms of limited consumption choices. Geodemographics assists in this process by preconstructing social identities, creating coherence by eliminating individual idiosyncrasies and offering a limited number of spatially defined aggregate models of identity. The genius of geodemographics is that it systematically produces such life-styles both from us and for us: it presents descriptions of our consuming selves that are actually normative models, or mean characteristics of our consumption (stereo) type to which we are exhorted to conform. Geodemographics enables marketers to make, within known levels of statistical confidence, that most psychologically effective of marketing pitches, that beginning with "People like you . . . "

The spatial corollary of this is that through its systematic application geodemographics both segments and potentially segregates social life, effectively producing the conditions of its own reproduction. Geodemographic marketing thus involves an effective tautology: the marketer purchases detailed psychodemographic data about consumer identity in digital form and sells these identities back to consumers in material form as consumer goods and services. Purchases by consumers generate more detailed information, updating statistical identity and providing a better understanding of the developing needs for further goods and services, and so on (see also Luke 1989, 110). The application of geodemographics to political campaigning potentially has a similar effect on the social reproduction of political values and behavior.

Although the power of geodemographics ultimately depends on an ability to persuade consumers to purchase particular commodity life-styles, consumers can make choices only if they are adequately informed, and geodemographics purposively controls the distribution of information in order to increase marketing efficiency. As geodemographics defines and *addresses* spatially specific modes of consumption, so individuals may be persuaded to adopt the statistical life-style identities that are created from them and for them, while others may be systematically prevented from doing so. Although discrimination on the basis of consumer life-styles is based on apparently less immutable categories than race, ethnicity, sex, or gender, the targeting of specific types of neighborhood may effect a de facto redlining of social life (see Larson 1992, 56; Flowerdew 1991, 9). As geodemographics is used to inform the marketer of particular "constellations of commodities" for particular neighborhoods, so the statistical identities that they produce may have an instrumentalizing affect, (re)producing the sociospatial differentiation of society and reinforcing past behaviors in particular places (Gandy 1993, 228). Weiss (1988, 27), for example, reveals that *Reader's Digest* in 1986 began to develop the means to distribute different editions to each of the 40 PRIZM

segments, with custom advertisements and articles in each edition; *Time* magazine has already employed selective binding to target special editions to the most affluent neighborhoods (Larson 1992, 43); and *Farm Journal* has used selective binding since 1984 to target readers with particular versions of the publication (Gandy 1993, 89). Direct marketing of a new product explicitly targeting Strategic Mapping's "suburban middle-age affluent with kids" (imported wine, antiques, car rental, catalog purchases, and home computing), for example, will not address "younger mobile center city singles" (tequila, generic laundry soap, nonfilter cigarettes, and pain relievers), and if the campaign is successful, of course, another exclusive consumption characteristic can be added to a neighborhood-based lifestyle profile.

While marketers are interested in expanding the range of their products as much as possible, "to get everyone into their sales" (vice-president of Claritas, Inc., cited in Larson 1992, 56), the returns diminish rapidly as marketers look beyond their best customers; a marketer's rule of thumb states that 80 percent of its market is accounted for by 20 percent of the population (Hughes 1991; Holtz 1992). Geodemographics helps marketers to focus on this safe segment of the population, and regardless of their individual needs and desires, consumers living in different neighborhoods will not be invited to purchase particular commodities and will not be provided with information increasingly necessary to participate effectively in consumption. In other words, they will be denied the opportunity to identify with a particular style of consumption.

The Role of the Consumer and Potential Resistance

At these early stages of the "marketing revolution," geodemographics is a long way from realizing what Daniel Bell (1973, 33) has called the "social alchemist's dream": the dream of ordering mass society. Nevertheless, its application potentially exerts a normalizing discipline over social life. The promotional rhetoric, albeit hype-ridden, promises a means to make consumers visible, to make their attitudes and values transparent, their behavior routine, and their lives predictable. The technology of geodemographic systems constructs the marketer as the subject of knowledge and the consumer as the object that is known or can be known; it establishes a new expertise that is located in a strategic position with respect to the consumer, with an "operational autonomy" over the reified realm of consumption (Feenberg 1991, 188). The positioning is both metaphorical and physical: the power of the marketer derives from the unique combination of electronic surveillance, GIS, and clustering routines that empower the marketer to identify, represent, and locate the consumer as an object, or, literally, as the target of its technical-calculative instruments (see Phillipson 1993, 147). Its goal is the "scientific management" of consumption: the systematic and compulsive recording and tabulation of information about consumers and the reduction of this information to laws, rules, and mathematical formulae that govern consumer dispositions and behaviors (see Taylor 1974, 40). Geodemographics converts the complex social process of interpersonal exchange into technical problems to be solved by the manipulation and representation of digital information, and thus sells an instrumental rather than intuitive solution to marketing problems. It represents a further deployment of a strategy to manage consumption in the interests of the dominant order of production (de Certeau 1984, xii).

Consumers are not, of course, mere bearers of relations of consumption, as geodemographic discourse would have it, and indeed the very necessity for continuously expanded surveillance and sophisticated modeling suggests consumer responses to marketing are always more complex and run ahead of predictions.

Even though consumers can only work with the limited range of commodities provided by the regime of production, they make their own meanings out of this material and use it to make sense of their own lives in relatively obscure ways (de Certeau 1984, 31).

The goal of marketing, of course, is to preemptively determine the meanings that consumers would make for themselves from commodities in order to sell these meanings to them in the form of commodities. It is then not merely the power to control consumer behavior that is sold by the geodemographics industry, but also the power to construct consumer identity. It does this by building models of consumer identity to be sold as informational commodities to commercial interests and by identifying the material commodities that those interests should sell in order for consumers to construct their identities. Geodemographics thus enhances the production of consumption that has become critical to the operation of contemporary capitalism (Baudrillard 1983, 27).

The majority of consumers, increasingly deprived of any real alternative, necessarily play a role in their own subordination to scientific marketing by acquiescing to surveillance and accepting the marketers' representations of their identity. Consumers are perhaps even flattered by the constant surveillance and exhortations by the marketing industry, because it appears to be solicitous of their own desires. There is a certain fascination in the apparent capacity of such sciences to know and represent us so effectively, and a certain seduction in its ability to tell us our unexpressed and unwilled wants and to meet our unconscious desires (Baudrillard 1985, 585). Exploiting a cultivated insecurity about individual and social identity, consumers are thus constantly answering questions about themselves, and the information obtained is processed and fed back to them, to be consumed as personality profiles and aggregate images of their life-style and opinions. In this, the latest marketing technologies are only another symptom of the "hypochondriacal madness" that defines contemporary society (Baudrillard 1985, 580).

Willful and active resistance to the organization of consumption and the strategic production of meaning and identity is also neither desirable nor possible, as both Baudrillard (1985) and de Certeau (1984) have recognized with rather different conclusions. To stand outside the sphere of consumption and the circulation of commodified meaning is to stand nowhere at all in contemporary society. There is literally no point of or to resistance, no stable position from which to oppose the strategy; it is always expanding, and as surveillance intensifies, as models increase in complexity, and as commodified meanings proliferate, any resistance is analyzed, rapidly incorporated into the model, packaged convincingly, and returned as part of the strategy. The consumer, whether naive or sophisticated, is thus bound up within this dialectic of social control.

For Baudrillard (1985, 588), the only effective response is a renunciation of subjectivity and abandonment of meaning, a radical compliance with the will of strategy, what he calls a "hyperconformist simulation of the very mechanisms of the system . . . of refusal by overacceptance." For de Certeau (1984, 37), on the other hand, and more promisingly, the response is diversionary tactics, an opportunistic gaming with the materials of strategy and passage through the inevitable gaps in its fabric. Thus, while overt resistance to the data-gathering activities of public and private institutions and to geodemographic marketing is impracticable and individually unwise—since this may be illegal and/or result in the withholding of personal services—consumers could adopt tactics that take advantage of the strategy's need for their complicity by "playing" with the technology. The Situationist's tactics of *derive* and *detournment* suggest themselves here: by intentionally imagining multiple identities and vicariously living alternative life-styles; by filling out forms simply for fun and constructing fantasy identities

for direct mail and other consumer services ("gender surfing," for example); by flooding the data bases with *too much* valuable information and thus destabilizing its value; and by creative acts of deception consumers might make a mockery of the systematic collection of data on their everyday lives, the scientific modeling of their identities, and the strategic attempts to control their behavior for the sake of commerce.

Such tactical gaming, however, is not open to all. Although all citizens of contemporary capitalist society are constituted as consumers, not all are provided with the means to consume (Bauman 1983, 42), and a significant minority is excluded from the pleasure even of playing with consumer identity. Moreover, even those of us who are able to play the game are constrained by the deadly serious intent of *strategy*. The terrain of social life has been systematically territorialized by capital and state for the purpose of efficient profit and administration, and marketing sciences are able to occupy a position from which to exercise surveillance and control over the field of consumption. Geodemographics, for example, is only possible because of the administrative geographies of the U.S. Bureau of the Census, the U.S. Postal Service, and various media monopolies, and there is increasing complementarity in function between public and private bureaucracies as the state ventures into the business of government and as commerce seeks to administer the lives of consumer-citizens. Geodemographics in its marketing and electoral applications is only the most recent of information technologies to extend the capacity for strategic control of everyday life.

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